IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Oestreicher et al.

SERIAL NO.: To be assigned

FILED: Herewith

FOR: A METHOD AND SYSTEM FOR DETERMINING WEIGHT AND POSITION OF A VEHICLE SEAT OCCUPANT

ATTORNEY DOCKET NO: 60,426-268 (97P7720US03)

Assistant Commissioner of Patents & Trademarks
Washington, D.C. 20231

Dear Sir:

PRELIMINARY AMENDMENT AND IDENTIFICATION OF POTENTIAL INTERFERENCE UNDER 37 CFR 1.607

Please preliminarily amend the subject patent application as follows.

IN THE SPECIFICATION

Please insert the following paragraph at page 1, line 7. A marked up version of these changes is attached at Appendix A.

-- This application is a continuation of 09/548,485 filed on April 13, 2000, which is a continuation of 08/191,719 filed on November 12, 1998 now U.S. Patent No. 6,070,115, which claims the benefit of U.S. Provisional Application Serial No. 60/065,115 filed on November 12, 1997. --

IN THE CLAIMS

Please cancel claims 1-35 and add the following new claims.

36. (New) Apparatus comprising:

a vehicle seat frame;

a plurality of deflectable mounting structures which together bear the entire weight of said frame;

a plurality of vehicle occupant weight sensor assemblies, each of said weight sensor assemblies comprising a strain gauge mounted on a corresponding one of said deflectable mounting structures; and

a vehicle occupant protection device responsive to said weight sensor assemblies.

37. (New) Apparatus as defined in claim 1 wherein said deflectable mounting structures support said frame on a track structure which guides movement of said frame.

38. (New) Apparatus as defined in claim 2 further comprising a deflectable seat cushion on said frame.

39. (New) Apparatus comprising:

a vehicle seat frame having a bottom portion and a back portion which together bear a vehicle occupant weight load;

a support structure which bears the entire weight of said frame and the entire magnitude of said occupant weight load, said support structure including a weight sensor apparatus which measures said entire magnitude of said occupant weight load; and

a vehicle occupant protection device responsive to said weight sensor apparatus,

said support structure including a pair of tracks which guide movement of said frame, said weight sensor apparatus comprising a plurality of weight sensor assemblies which measure portions of said occupant weight load acting on said tracks,

said weight sensor assemblies being operatively interposed between said frame and said tracks,

each of said weight sensor assemblies comprising a strain gauge mounted on a corresponding deflectable portion of said support structure.

40. (New) Apparatus as defined in claim 4 further comprising a deflectable seat cushion covering said bottom portion of said frame.

41. (New) A weight sensing apparatus for a vehicle seat comprising:

a plurality of sensors each including a mounting portion for attachment to a vehicle seat structure and a deflectable portion that deflects in response to a weight force applied to the vehicle seat structure to generate a weight signal; and

a controller for receiving said weight signals from said sensors to determine seat occupant weight.

42. (New) An apparatus as in claim 41 including at least one strain gage mounted to said deflectable portion of each of said sensors.

43. (New) An apparatus as in claim 42 wherein said at least one strain gage is a plurality of strain gages mounted in a predetermined spaced relationship to each other on said deflectable portion.

44. (New) An apparatus as in claim 41 wherein said seat structure is a seat pan.

45. (New) An apparatus as in claim 44 wherein each of said sensors includes a support portion mounted to a vehicle seat track member such that said deflectable portion is positioned between said mounting and support portions.

46. (New) An apparatus as in claim 44 wherein said seat pan is rectangular in shape defining four corners and said plurality of sensors is comprised of four sensors with one of said sensors mounted at each of said corners.

47. (New) An apparatus as in claim 41 including a safety restraint device controlled by said controller in response to seat occupant weight.

48. (New) An apparatus as in claim 47 wherein said safety restraint device is not deployed if seat occupant weight is below a predetermined weight.

49. (New) A method for determining seat occupant weight including the steps of:

mounting a plurality of sensors to a vehicle structure with each sensor including a deflectable portion that deflects in response to a weight force applied to the vehicle seat structure;

generating a weight signal from each of the sensors in response to the deflection; and

determining seat occupant weight from the signals.

50. (New) A method as in claim 49 further comprising the step of controlling a safety restraint device based on the seat occupant weight.

51. (New) A method as in claim 50 further comprising the step of preventing deployment of the safety restraint device if the seat occupant weight is below a predetermined weight.

52. (New) A method as in claim 49 further comprising the step of determining a center of gravity of the seat occupant from the signals.

53. (New) A method as in claim 52 further comprising the step of controlling a safety restraint device based on the seat occupant weight and center of gravity.

54. (New) A method as in claim 49 further comprising the step of mounting a strain gage to the deflectable portion of each sensor.

55. (New) A method as in claim 49 wherein the seat structure is a seat pan and the method further comprises the step of mounting the sensors between the seat pan and a seat track assembly.

REMARKS

Claims 1-35 have been cancelled. By the present amendment, Applicants have added new claims 36-40, which have been copied from Claims 1-5, respectively, of United States Patent No. 6,039,344 to Mehney et al. (Mehney '344) issued on March 21, 2000. Thus, the requirements of 37 CFR 1.607(a)(4) are met, i.e., Applicants have a pending claim that is present in the application within the one year period from the issue date of the Mehney '344 patent. Applicants have also added new claims 41-55.

The entire interest in Applicants' invention, which is the subject of this application has been assigned to Siemens Automotive Corporation.

Applicant's Effective Filing Date

The effective filing date for all of Applicant's claims, i.e., the newly copied claims 36-40, is November 12, 1997 which is the filing date of provisional application 60/065,115 to which United States Patent No. 6,070,115 (the parent of the present application) claims priority to.

Patentee's Effective Filing Date

The effective filing date for Claims 1-5 of the Mehney '344 patent is January 9, 1998, the filing date of the patent.

Proposed Count

Applicants present the following proposed Count 1:

Apparatus comprising:

a vehicle seat frame;

a plurality of deflectable mounting structures which together bear the entire weight of said frame;

a plurality of vehicle occupant weight sensor assemblies, each of said weight sensor assemblies comprising a strain gauge mounted on a corresponding one of said deflectable mounting structures; and

a vehicle occupant protection device responsive to said weight sensor assemblies.

The proposed Count 1 is identical to Applicant's Claim 36 and Claim 1 of the Mehney '344 patent.

Summary

Applicant's effective filing date is prior to the patentee's effective filing date thereby entitling Applicants to priority of invention.

It is believed that no additional fees are due, however, the Commissioner is authorized to charge Deposit Account No. 50-1482, in the name of Carlson, Gaskey & Olds, for any additional fees or credit the account for any overpayment.

Respectfully submitted,

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Dated: March 16, 2001

CERTIFICATE OF MAILING

I hereby certify that the enclosed Amendment is being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to Assistant Commissioner of Patents and Trademarks, Washington, D.C. 20231, on this 16 th day of March, 2001.

Laura Combs

Laura Combs

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APPENDIX A

Please make the following changes to the first full paragraph at page 1, lines 7-11:

[This application claims the benefit of U.S. Provisional Application 60/065,115, filed on November 12, 1997.] This application is a continuation of 09/548,485 filed on April 13, 2000, which is a continuation of 08/191,719 filed on November 12, 1998 now U.S. Patent No. 6,070,115, which claims the benefit of U.S. Provisional Application Serial No. 60/065,115 filed on November 12, 1997. This invention relates to vehicle safety restraint systems and more particularly to a method and system for controlling the reaction of safety restraint systems in response to weight and position of a vehicle occupant.